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EXAMINER

TO, BAOQUOC N

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 02/24/2004

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/545,964

Applicant(s)

HIND ET AL.

Examiner

Baoquoc N To

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-31 are pending in this application.

Response to Arguments

2. Applicant's arguments filed 12/01/03 have been fully considered but they are not persuasive.

After carefully reviewing the applicant's remarks and the references supplied from examiner Hung Pham, the amendment was not overcome by cited reference. The "parameters" need more clarification.

The applicant argues "Scott does not transmit the last-broadcast-number-received and the last-sequence-number-received to the second database."

The examiner respectfully disagrees with the above argument because Scott suggests "After each changed record is stored in the external file, assigned a next-broadcast-number and a next-sequence-number, a decision is made whether it is time to broadcast to each remote computer 17 the records stored thus far (block 35)." (col. 6, lines 22-26). Furthermore, Scott also suggests "the next-sequence-number is incremented by 1 (block 36) each time the record changed" (col. 6, lines 30-32). This suggestion meant each time the record changed in the database 16 of the central computer the record incremented.

The applicant also argues "Scott does not transmit a first update message from the first database to the second database, the first update message including the incremented first synchronization parameter, the second synchronization parameter, and the updated data record from the first database."

The examiner respectfully disagrees with the above argument because as explained above Scott suggests the incremented each records when it changed in the database 16 of center computer. In addition, Scott also suggest "a packet broadcasting operation (block 40) for broadcasting records changed in the master database to each remote computer 17" (col. 5, lines 13-15). This packet broadcasting contained the incremented record number, the broadcast number, and the record itself which equivalent to the claimed.

The applicant also argues "Scott, however, is directed to a system to synchronization record in a receive-only system. Scott, Abstract; 5:9-14. Furthermore, there is no motivation in Scott to modify the system to include a bi-directional communication capability."

The examiner respectfully disagrees with the above argument because first the claim was not states this is a bi-directional communication capability. Second, from another point of view, the center computer in the Scott is also the wireless device in

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wherein the claim was not distinguish the central computer, which is not a wireless device.

The applicant argues "Scott teaches that manual intervention is required for synchronization conflicts, and thus teaches away from the present invention."

The examiner respectfully disagrees with the above argument because Scott suggests "intervention will be required to recover changes 5 through 7 and synchronize the replica data in computer C with the master database" (col. 10, lines 9-11). The intervention here does not indicate that the work is done by the system administrator or user. Since all the incrementing and other updating are done in the algorithm, it would be obvious that the resolving conflict is done by the created software.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4, 6, 8-15, 18-19, 25, and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US 5649195).

With respect to claims 1 and 18, Scott discloses associating a pair of synchronization parameters (next-broadcast-number and next-sequence-number) with each data record stored in the first (central computer in fig. 1, item #15) and second database (remote computer in fig. 1, item #17), the pair including a first synchronization parameter (next-broadcast-number and next-sequence-number) associated with the First database, (col. 5, lines 46-54), and a second synchronization parameter associated with the second database, (col. 5, lines 54-66);

Updating a data record at the first database; (records changed in the master database, (col. 5, lines 14-15);

Incrementing the first synchronization parameter associated with the updated data record at the first database, (col. 6, lines 37-43);

Transmitting a first update message from the first database to the second database, (col. 8, lines 30-32), the first update message including the incremented first synchronization parameter, (col. 6, lines 37-43), the second synchronization parameter, (col. 5, lines 54-56), and the updated data record from the first database, (col. 5, lines 14-15);

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Wherein the first synchronization parameters and the second synchronization parameters are indicative of the current version of data records stored the first or second databases (col. 7, lines 25-47).

Scott discloses a database synchronization system according to the present invention is schematically illustrated. The system 10 comprises a central computer 15 and a plurality of remote computers 17 in receive-only communication 11 with the central computer. Scott does not clearly teach, "receiving the first update message at the second database and updating the data record at the second database using the information from the first update message". However, Scott discloses in fig. 2C, the selective updating operation (Block 60) within each remote computer 17 generally comprises receiving broadcast (Block 62) from the central computer 15, (the second database receive update message from the first database, col. 5, lines 58-62) as step of receiving the first update message at the second database. Comparing the receive next-broadcast-number and next-sequence-number with the last-broadcast-number-received and the last sequence-number-received (Block 74), and updating the replica with the record (Block 69) based on the result of the comparison, (the second database receive the information from the first database and then update the information, col. 5, lines 52-67) as step of updating the d3ta record at the second database using the information from the first update message. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Scott by including receiving the first update message at the second database in order to synchronize plurality of databases, (col. 1, lines 7-8).

As to claim 2, Scott further discloses coupling the first database to a host system, (col. 5, lines 7-28); and coupling the second database to a portable data communication device, (col. 5, lines 7-28).

As to claim 4, Scott further discloses designating one of the databases as the master database and the other database as a slave database, (col. 5, lines 7-28).

As to claim 6, Scott further discloses, wherein the determining step includes comparing the second synchronization parameter stored at the second database with the second synchronization parameter transmitted to the second database in the first update message, (col. 5, lines 46-66).

As to claim 8, Scott further discloses wherein the associating step further includes the step of modifying the data records by appending the pair of synchronization parameters to the data records and storing the modified data records in the respective database, (col. 5, line 7-28)

As claim to 9, Scott further discloses storing the updated data record at the second database, (col. 5, lines 7-28); and incrementing the first synchronization parameter associated with the data record at the second database so that it is synchronized with the first synchronization parameter associated with the data record at the first database, (col. 6, lines 30-43).

As claim to 10, Scott further discloses wherein the data records represent calendar entries associated with an electronic calendar system, (col. 5, lines 7-28).

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With respect to claim 11, Scott discloses associating a first device synchronization parameter and a first host synchronization parameter with each data record store at the host system, (col. 5, lines 4-54); associating a second device synchronization parameter and a second host synchronization parameter with each data record stored at the portable data communication device, (col. 5, lines 54-66); if a data record is updated at the host system, then updating the first host synchronization parameter, and Transmitting a first update message form the host system to the portable data communication device, (col. 5, lines 14-15 and col. 8, lines 30-44); and if a data record is updated at the device, then update the second device synchronization parameter, and Transmitting a second update message form the portable data communication device to the host system, (col. 5, lines 14-15 and col. 8, lines 30-44). Scott does not clearly disclose "Transmitting a second update message from the portable data communication device to the host system". However, Scott discloses the broadcasting operation (Block 40) permits each group of records to be Transmitted to each remote computer 17n times. Each broadcast, except for the first, include tow groups of records: the group having the highest new broadcast number, and the group having the preceding newt broadcast number. This is in FIGS. 5A-5C. In the first broadcast, four records (represented as change 1, change 2, change 3 and change 4) were broadcast, (col. 8, lines 30-44). Wherein the first and second host synchronization parameters and the first and second device synchronization parameters are indicative of the current versions of data records stored at the host computer or at the portable data communication device (col. 7, lines 25-47). Therefore, it Would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Scoff by including Transmitting a second update message from the portable data communication device to the host system in order to synchronize plurality of databases without any conflict, (col. 1, lines 7-8).

As to claim 12, Scott further discloses wherein the first update message includes the updated first host synchronization parameter, the first device synchronization parameter, and the updated data record stored at the host system, (col. 12, lines 7-24).

As to claim 13, Scott further discloses wherein the second update message includes the updated second device synchronization parameter, the second host synchronization parameter, and the updated data record stored at the device, (col. 5, lines 7-28).

As to claim 14, Scott further discloses receiving the first update message at the device, (col. 5, lines 7-28); and if there is no conflict detected at the device, then updating the data record at the device using information from the first update message, (col. 5, lines 7-28).

As to claim 15, Scott further discloses receiving the second update message at the host, (col. 5, lines 7-28); and if there is no conflict detected at the host, the updating the data record at the host using the in-formation from the second update message, (col. 5, lines 7-28).

With respect to claim 19, the subject matter of claim 19 is rejected in the analysis above in claim 1. Therefore, claim 19 is also rejected for the same reasons as given in claim 1.

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With respect to claims 25 and 27, the subject matter of claim 19 is rejected in the analysis above in claim 1. Therefore, claims 25 and 2*7 are also rejected for the same reasons as given in claim 1.

As to claim 28, Scott discloses receiving the first update message at the portable data communication device, (col. 5, lines 7-67); updating the data record at the portable data communication device using the information from the first update message, (col. 5, lines 7-67); receiving the second update message at the one host system; updating the second data record at the one host system using the information from the second update message, (col. 5, lines 7-67); receiving the third update message at the second host system; and updating the second ~data record at the second host system using the information from the third update message, (col. 5, lines 7-67); incrementing the second synchronization parameter associated with the updated second data record at the portable data communication device for the one host system, (col. 6, lines 30-44); incrementing the second synchronization parameter associated with the updated second data record at the portable data communication device for the second hostsystem,(col. 6, lines 30-44); transmitting a second update message form the portable data communication device to the one host system, the second update message including the incremented second synchronization parameter for the one host system, the first synchronization parameter for the one host system, and the updated second data record from the portable data communication device, (col. 8, lines 30-40); transmitting a third update message from the portable data communication device to the second host system, the third update message including the incremented second synchronization parameter for the second host system, the first synchronization parameter for the second host system, and the updated second data record from the portable data communication device, (col. 8, lines 30-40); receiving the second update message at the one host system, (col. 8, lines 30-40); updating the second data record at the one host system using the information from the second update message, (col. 8, lines 30-40); receiving the third update message at the second host system, (col. 8, lines 30-40); and updating the second data record at the second host system using the information form the third update message, (col. 8, lines 30-40).

As to claim 29-31, the subject matter of claim 29-31 are rejected in the analysis above in claim 28. Therefore, claim 29-31 are also rejected for the same reasons as given in claim 28.

4. Claims 3, 16, 20-24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (5649195)) in view of Wu (US 6463427131).

As to claims 3 and 16, Scott discloses the system 10 comprises a central computer 15 and a plurality of remote computers 17 in receive-only communication 11 with the central computer, (col. 5, lines 7-11). However, Scott does not disclose, 11 providing a wireless data network for transmitting update messages between the two databases". Wu discloses the desktop computer 4 may operate in a wired or wireless networked environment using logic connections to one or more remote computer, such as a remote computer 49, (col. 4, lines 32-44) as step of providing a wireless data network for transmitting update messages between the two databases. Therefore, it would have

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been obvious to one of ordinary skill in the art at the time the invention was made to modify Scott by including providing a wireless data network for transmitting update messages between the two databases as taught by Wu in order to search for changes and deletions of objects between a mobile device and a desktop computer, (col. 1, lines 10-11).

As to claims 20-24 Scott discloses the system 10 comprises a central computer 15 and a plurality of remote computers 17 in receive-only communication 11 with the central computer, (col. 5, lines 7-11). However, Scott does not disclose, "Wherein the portable data communication device is a two-way pager". Wu discloses the mobile device 3 may not be embodied as the H/PC brand of desktop assistant, but could also be implemented as another type of personal digital assistant (PDA), another person organizer, a palmtop computer, a similar computerized notepad device, a phone or a pager, (col. 5, lines 20-24) as step of wherein the portable data communication device is a two-way pager; wherein the portable data communication device is a PDA; wherein the portable data communication device is a palmtop; and wherein the portable data communication device is a one and one-half way pager. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Scott by including wherein the portable data communication device is a two-way pager, wherein the portable data communication device is a PDA; wherein the portable data communication device is a palmtop; and wherein the portable data communication device is a one and one-half way pager as taught by Wu in order to search for changes and deletions of objects between a mobile device and a desktop Computer, (col. 1, lines 10-11).

As to claim 26, Scott further discloses incrementing the second synchronization parameter associated with the updated data record at the portable data communication device for the second host system, (col. 6, lines 30-44); transmitting a second update message from the portable data communication device to the second host system, the second update message including the incremented second synchronization parameter for the second host system, the first synchronization parameter for the second host system, and the updated data record from the portable data communication device, (col. 8, lines 30-44); receiving the second update message at the second host system, (col. 8, lines 30-44); and updating the data record at the second host system using the information from the second to update message, (col. 8, lines 30-44).

5. Claims 5, 7, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US 5649195) in view of Bauer et al. (US 5926816).

As to claim 5, Scott further discloses designating the second database as a master and the first database as a slave database, (col. 5, lines 7-28). Scott discloses the received packet is ignored if the received next-sequence number is not greater than the last-sequence-number-received, for example, by one (1). Upon detection of a last change flag, the last-broadcast-number-received is incremented and the last-sequence-number-received is reset. However, Scott does not teach, "After receiving the first update message at the second database, then determining whether a conflict has occurred between the two database; and if a conflict has occurred, then

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ignoring the first update message received at the second database". Bauer discloses there is one conflict in the databases, which is detected by the server 10 upon receipt of the update messages from client 20x. Specifically, the change to the data field R(1)C1 is in conflict with the change previously made by client 20a. The conflict is resolved at the server 10 and the central database table 11 2a is updated, (col. 17, lines 62-68) as step of after receiving the first update message at the second database then determining whether a conflict has occurred between the two database, and if a conflict has occurred, then ignoring the first update message received at the second database. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Scott by including receiving the first update message at the second database, then determining whether a conflict has occurred between the two database, and if a conflict has occurred, then ignoring the first update message received at the second database in order for the user to perform duties in a timely manner, (col. 1, lines 111-12).

As to claim 7, Scott further discloses designating the second database as a master and the first database as a slave, (col. 5, lines 7-28); updating the data record at the second database, (col. 5, lines 7-28); incrementing the second synchronization parameter associated with the updated data record at the second database, (col. 5, lines 46-66); transmitting a second update message from the second database to the first database, the second update message including the incremented second synchronization parameter, the first synchronization parameter, and the updated data record from the second database, (col. 8, lines 30-44); receiving the second update message at the first database, (col. 8, lines 30-44). Scott discloses the received packet is ignored if the received next-sequence number is not greater than the last-sequence-number-received, for example, by one (1). Upon detection of a last change flag, the last-broadcast-number-received is incremented and the last-sequence-number-received is reset. However, Scott does not teach, "detecting a conflict between the first and second databases, and updating the data record at the first database using the information from the second update message." Bauer discloses there is one conflict in the databases, which is detected by the server 10 upon receipt of the update messages from client 20x. Specifically, the change to the data field R(1)C1 is in conflict with the change previously made by client 20a. The conflict is resolved at the sewer 10 and the central database table 11 2a is updated, (col. 17, lines 62-68) as step of detecting a conflict between the first and second databases, and updating the! data record at the first database using the information from the second update message. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Scott by including detecting a conflict between the first and second databases, and updating the data record at the first database using the information from the second update message in order for the user to perform duties in a timely manner, (col. 1, lines 11-12).

With respect to claim 17, Scott discloses designating the host system as the master and the portable data communication device as the slave, (col. 5, lines 46-54); simultaneously updating a particular data record at both the host system and the

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portable data communication device, (col. 5, lines 7-29); transmitting a first update message from the host system to the portable data communicate device, the first update message including a first host synchronization parameter, a first device synchronization parameter associated with the updated data record stored at the host system, and the updated data record stored at the host system, (col. 8, lines 30-44); transmitting a second update message from the portable data communication device to the host system, the second update message including a second host synchronization parameter, a second device synchronization parameter associated with the updated data record stored at the portable communication device, and the updated data record stored at the portable data communication device, (col. 8, lines 30-44);

Scott discloses the received packet is ignored if the received next-sequence number is not greater than the last-sequence-number-received, for example, by one (1). Upon detection of a last change flag, the last-broadcast number-received is incremented and the last-sequence-number-received is reset. However, Scott does not teach "receiving the second update message at the host system, detecting a conflict has occurred for the particular data record, and ignoring the second update message;

and receiving the first update message at the portable data communication device, detecting a conflict has occurred for the particular data record, and updating the data record at the portable data communication device using the information from the first update message". Bauer discloses there is one conflict in the databases, which is detected by the server 10 upon receipt of the update messages from client 20x.

Specifically, the change to the data field R(1)C1 is in conflict with the change previously made by client 20a. The conflict is resolved at the server 10 and the central database table 11 2a is updated, (col. 17, lines 62-68) as step of receiving the second update message at the host system, detecting a conflict has occurred for the particular data record, and ignoring the second update messages; and receiving the first update message at the portable data communication device, detecting a conflict has occurred for the particular data record, and updating the data record at the portable data communication device using the information from the first update message.

Wherein the first and second host synchronization parameters and the first and second device synchronization parameters are indicative of the current versions of data records stored at the host computer or at the portable data communication device (col. 7, lines 25-47). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Scott by including receiving the second update message at the host system, detecting a conflict has occurred for the particular data record, and ignoring the second update messages; and receiving the first update message at the portable data communication device, detecting a conflict has occurred for the particular data record, and updating the data record at the portable data communication device using the information from the first update message in order for the user to perform duties in a timely manner (col. 1, lines 11 -12).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is (703) 305-1949 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at (703) 305-9790.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

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The fax numbers for the organization where this application or proceeding is assigned are as follow:

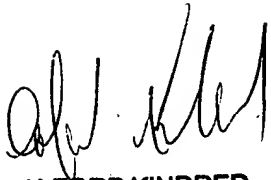
(703) 872-9306 [Official Communication]

Hand-delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA 22202
Fourth Floor (Receptionist).

Baoquoc N. To

Feb 17, 2004

A handwritten signature in black ink, appearing to read 'Alford Kindred', is written over the printed name.

ALFORD KINDRED
PRIMARY EXAMINER